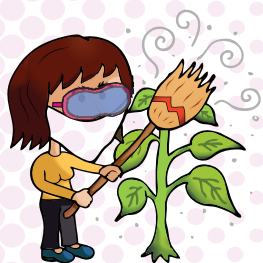


# i REMEMBER !



Ash falls on the plants leaves, covering them, it avoids the pass of the sunlight, then they die.

To prevent this from happening you should gently shake the leaves causing the ash to fall.

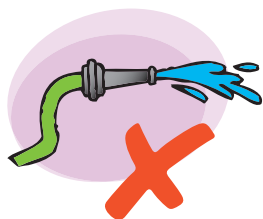
Farm animals and pets could be also affected by ash. Where possible they should take shelter indoors or be moved to areas where no ash has fallen.

They **must be protected** so that they do not breathe ash. Cattle should eat **grass without ash**, as it damages their teeth and stomach.

You can use other food sources such as nutritional supplements.



## After an ash fall



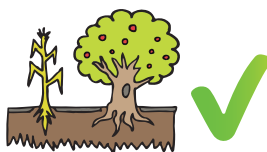
**DO NOT use a hose** to clean the ash. When mixed with water it forms a heavy paste similar to concrete. You can use water to slightly moisten it and prevent the rising.

**Sweep up the ash.** If it is very thick you can use a shovel. Pick it up in sturdy bags. **Don't throw them out on the street.**

**Clean the roofs.** The weight of the ash can lead them to collapse. So they must be cleaned, **being very careful!**



## Myths and truths about ash



### Ash **DO** improves soils.

Although ash falls can ruin crops, in the medium and long term they enrich the soil and producing better harvests.

Ash **DOES NOT** cause fires. By the time it hits the ground, it has almost completely cooled down.



Ash **DOES** affect aircraft. It can damage the motors / turbines causing accidents. For this reason, flights are sometimes suspended.

## Ashmeters

The "Instituto Geofísico" has placed ashmeters on the main volcanoes of Ecuador. The ashmeters are containers that allow researchers to know where the ash falls, quantify it and see its characteristics. If you see an ashmeter **don't destroy it, TAKE CARE OF IT!**



Is there ash falling in your community?

**REPORT IT!**

<https://www.igepn.edu.ec/reporte-de-caida-de-ceniza>



for more information please visit:

**[www.igepn.edu.ec](http://www.igepn.edu.ec)**



2020

Translation:

What's falling from the sky?

# Volcanic Ash



**IG**  
Instituto Geofísico EPN

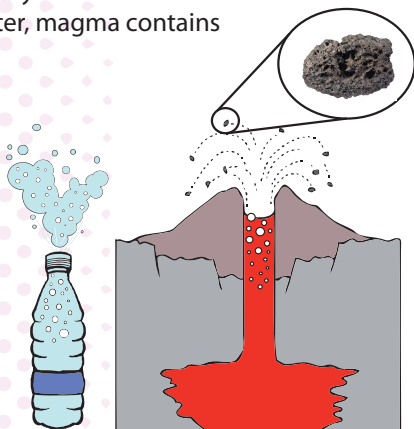
**Cruz Roja Ecuatoriana**

D. Sierra, S. Santamaría, M. Encalada, B. Bernard

# Pyroclasts

Magma is made of partially **molten rock**. Like soda or mineral water, magma contains large quantities of gases inside, which generate a lot of pressure.

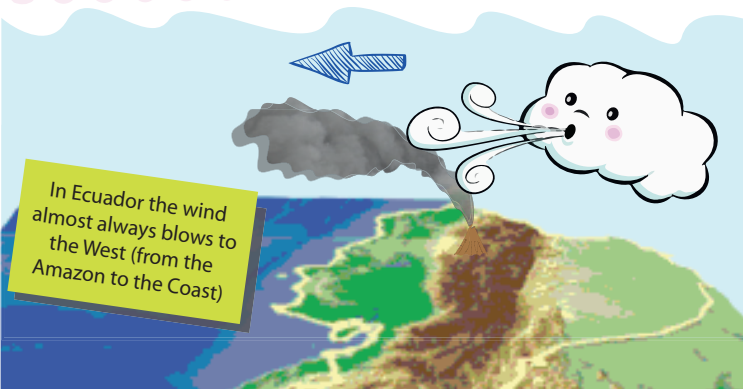
During eruptions, these gases are violently ejected, causing the rock to break into millions of pieces with different sizes.



These rock fragments are called pyroclasts. Its name comes from Latin:

**PYRO= fire**      **CLAST= fragment**

The largest and heaviest fragments can be the size of a car; due to gravity they will always fall close to the crater. On the other hand, the smallest and lightest fragments can be transported by the wind, reaching distant places.

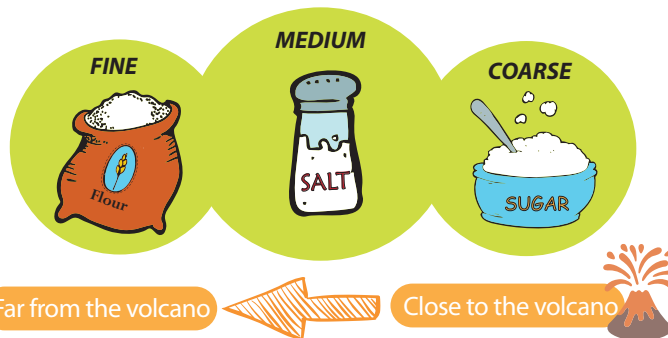


## Volcanic Ash

Pyroclasts with a diameter less than 2 mm are called **ash**.

## SIZE

Volcanic ash has different sizes, which can be easily understood by comparison with everyday objects.



Coarse ash always falls near the volcano, but fine ash can travel through long distances.

But that's not the only reason of fine ash being problematic. Sometimes it remains suspended in the environment where it is easily breathed.

Fine ash has a great capacity to absorb water which increases its weight; therefore, when accumulating on the roofs, it can cause them to collapse, causing harm to people.

## COLOR

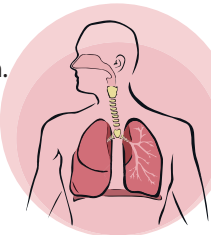


Other characteristics of ash, such as **color**, are also important because they offer **valuable clues** to the scientists about the processes taking place in the volcano or its eruptive phases.

For example: black, white, gray and red ash are distinguished. **REMEMBER!** this information is very valuable for the scientists and the authorities when reporting an ash fall in your community.

## What to do in cases of ash fall?

Ash might be hazardous to an individual's health. It can irritate the skin and moreover it causes respiratory problems. Children and the elderly are especially sensitive.



In case of ash fall **don't forget to protect yourself** wearing:



**CHOOSE YOUR MASK WELL !!**



[www.youtube.com/watch?v=SA1bUuMQXus](https://www.youtube.com/watch?v=SA1bUuMQXus)



Remember, not all masks offer the same protection. It is convenient to find masks that protect against **particulated matter (N95)** and **well fit to the shape of your face**.

Those who will be exposed to ash for prolonged periods of time could require better protection.